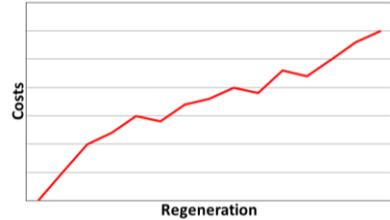




While boilers, chillers, and other mechanical equipment are often subject to routine inspections and performance evaluations, a Water Softener System often toils in anonymity until it suffers a major malfunction.

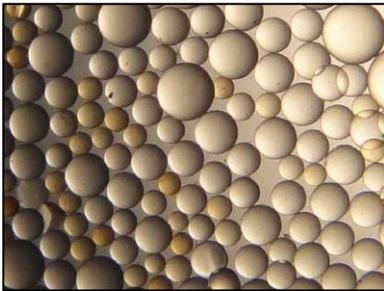
Most Water Softener Systems are not operating anywhere near their design capacity. Many times a combination of ion exchange resin condition, operational short-comings and improper regeneration practices conspire to result in unscheduled regenerations, **excessive salt usage and additional water consumption.**



To ensure optimal water softener operation, there are two things that should be done regularly as part of any comprehensive Water Management Program.

Ion Exchange Resin Analysis

As a resin ages or fouls, its capacity will decline. It will eventually reach a point where the replacement cost of a new resin is lower than the operating costs associated with shorter and shorter service runs, increased regeneration frequency and additional salt and water consumption.



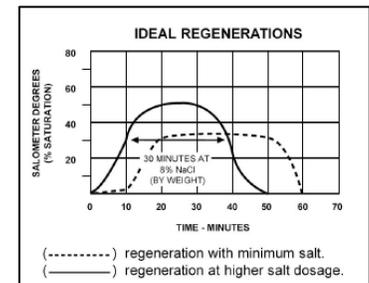
Ion Exchange Resin

An assessment of the physical condition of resin includes both bead integrity (a measure of how many beads are broken and cracked) and a measure of fouling or contamination by suspended solids, precipitants, and miscellaneous debris. When the contaminants coat the resin beads, they form a barrier and make it more difficult for ions to exchange. A complete report of resin conditions will include enhanced and magnified photographs.

Brine Elution Study

Brine is the fuel that drives the ion exchange process. Just as important as having the correct air/fuel mixture in an internal combustion engine, having the proper brine strength and contact time is essential for troubleshooting performance issues and optimizing softener operation.

A Sodium Elution Study involves collecting and measuring regenerant concentrations and comparing them to resin requirements. This data is plotted graphically to reflect brine strength versus contact time. To minimize regeneration frequency, reduce salt consumption, and conserve water, ion exchange resin must be regenerated very precisely.



Sodium Elution Study Graph

The data gathered during a Water Softener Performance Optimization Study provides information that allows for fine tuning of the Water Softener System. It also becomes a baseline against which subsequent studies can be compared while reducing salt and water costs associated with Water Softener operation.



Innovative Solutions Provider